

## Przepis 3

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- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **22**
- SRM **5.3**

### Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **7 %**
- Size with trub loss **23.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.6 liter(s)**

### Mash information

- Mash efficiency **92 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.1 liter(s)**
- Total mash volume **18.8 liter(s)**

### Steps

- Temp **62 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **1 min**

### Mash step by step

- Heat up **14.1 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **45 min** at **62C**
- Keep mash **15 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **18.2 liter(s)** of **76C** water or to achieve **27.6 liter(s)** of wort

### Fermentables

| Type  | Name                        | Amount         | Yield | EBC |
|-------|-----------------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt        | 3.5 kg (74.5%) | 80 %  | 5   |
| Grain | Strzegom Monachijski typ II | 1.2 kg (25.5%) | 79 %  | 22  |

### Hops

| Use for             | Name    | Amount | Time   | Alpha acid |
|---------------------|---------|--------|--------|------------|
| Boil                | Magnat  | 10 g   | 60 min | 11.2 %     |
| Aroma (end of boil) | Perle   | 15 g   | 20 min | 7 %        |
| Whirlpool           | lunga   | 15 g   | 0 min  | 5.1 %      |
| Whirlpool           | Oktawia | 20 g   | 0 min  | 7.1 %      |
| Aroma (end of boil) | Perle   | 15 g   | 15 min | 7 %        |

### Yeasts

| Name | Type  | Form  | Amount | Laboratory |
|------|-------|-------|--------|------------|
| US-4 | Lager | Slant | 100 ml | ---        |